

A. 35 U.S.C. §103 Rejections

Claims 1-9 stand rejected under 35 U.S.C. §103(a) as unpatentable over Applicant's Admitted* Prior Art in view of U.S. Patent No. 4,090,219 to Ernstoff et al. (Hereinafter "Ernstoff"), claims 10-31 stand rejected under 35 U.S.C. §103(a) as unpatentable over Applicant's Admitted Prior Art in view of Ernstoff and U.S. Patent No. 5,528,262 to McDowall et al. (Hereinafter "McDowall"), claims 32-34 stand rejected under 35 U.S.C. §103(a) as unpatentable over Applicant's Admitted Prior Art in view of Ernstoff and U.S. Patent No. 5,327,229 to Konno et al. (Hereinafter "Konno"), and claims 35-45 stand rejected under 35 U.S.C. §103(a) as unpatentable over Applicant's Admitted Prior Art in view of Ernstoff, Konno and McDowall. Applicant respectfully traverses these rejections for at least the following reasons.

1. Summary of the Invention

The claimed method in accordance with independent claims 1 and 9 is directed generally to a driving method for a liquid crystal display including a step of compressing original video signals by $1/(3n)$ times in a time axis direction. As result of this method, one image frame T_f is divided into a plurality of subframes, and during each subframe, three color images of red, green and blue are sequentially displayed.

The claimed invention in accordance with independent claims 3 and 6 is directed generally to a liquid crystal display, including, *inter alia*, an n-speed field sequential color signal generation circuit operationally connected to at least one backlight and a display section.

The claimed method in accordance with independent claims 32-34 is directed generally to a method for displaying a liquid crystal display comprising a step of compressing an original red, green and blue video signal, respectively entered from outside by $1/(3n)$ times into a respective red, green and blue video signal, “n” being an integer larger than 2 and represents a number of subframes comprising a single frame.

2. Examiner’s Failure to Consider Each and Every Claimed Feature

In reviewing the Office Action, it appears that the Examiner fails to consider the amended subject matter set forth in independent claims 3 and 6. In particular, the feature “an n-speed field sequential color signal generation circuit operationally connected to said at least one backlight and said display section,” was not specifically addressed by the Examiner. Please note that in accordance with §2116.01 of the M.P.E.P., “all the limitations of a claim must be considered when weighing the differences between the claimed invention and the prior art when determining the obviousness of a process or method claim.” *See also* M.P.E.P. §2143.03. Applicant respectfully request that the Examiner afford full consideration to the aforementioned claimed feature.

Notwithstanding the above comments, the proposed combination of Applicant’s Admitted Prior Art and Ernstoff both lack any teaching, disclosure or suggestion of a liquid crystal display that includes an n-speed field sequential color signal generation circuit operationally connected to at least one backlight and a display section. Insofar as each cited reference fails to disclose this feature, a case of *prima facie* obviousness against the rejected

claims cannot be supported. Accordingly, withdrawal of the rejection with respect to these claims and the claims depending therefrom is respectfully solicited.

3. The Proposed Combination of References Fails to Disclose the Claimed Invention

Applicant further contends that Applicant's Admitted Prior Art, either alone or in combination with Ernstoff, Konno and/or McDowall, clearly fails to teach, disclose or suggest the claimed subject matter of independent claims 1 and 9. In particular, the alleged Admitted Prior Art, as conceded by the Examiner, clearly fails to disclose compressing original video signals by 1/(3n) times in a time axis direction. Moreover, the Examiner concedes that the secondary reference Ernstoff merely discloses a color display in which one image frame comprises 2 fields, and thus, lacks an image frame having three fields. The secondary references Konno and McDowall fail to adequately modify the aforementioned references since it also fails to disclose such features.

Hence, it appears that the Examiner has taken individual teachings from the cited references in order to support a *prima facie* case of obviousness in spite of the lack of any motivation or suggestion contained therein that promotes their combination. It is well established that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

In the present situation, there is no suggestion in Applicant's Admitted Prior Art that supports it being modified so as to include a step of compressing original video signals by 1/(3n)

times in a time axis direction. Further, Ernstoff lacks any disclosure that supports it being modified so as to include an image frame comprising 3 fields. As previously mentioned, Konno and McDowall both lack any disclosure regarding the aforementioned references.

Therefore, the proposed combination of Applicant's Admitted Prior Art, Ernstoff, Konno and McDowall is improper insofar as each cited reference lacks any disclosure that would support the desirability of their resultant combination. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of their combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01 (2001).

In view of the foregoing, a case of *prima facie* obviousness cannot be supported. Withdrawal of the rejection with respect to the claims is respectfully solicited.

4. The Proposed Combination of References Fails to Disclose Claims 32-45

Regarding the rejection of claims 32-45, it is respectfully contended that the subject application lacks any admission regarding a method of driving a liquid crystal display that includes a step of compressing an original red, green and blue video signal, respectively entered from outside by 1/(3n) times into a respective red, green and blue video signal. For instance, the claimed invention resulted from attempts made by the present inventors to overcome the deficiencies in the conventional sequential method, which has an operational defect due to the fact that the red, green and blue images are each displayed once for one-third the duration of one frame. Such a design results in a flicker of the screen, which is very undesirable. Consequently, the present inventors sought to overcome this deficiency by dividing one frame into plural


subframes so as to sequentially display the three color images in each subframe. As shown in Fig. 5 of the detailed drawings, this concept is realized by providing an n-speed field sequential color signal generation circuit (403) which compresses original video signals R, G and B by $1/(3n)$ times in a time axis direction.

Hence, no admission exists for a method of driving a liquid crystal display that includes a step of compressing an original red, green and blue video signal, respectively entered from outside by $1/(3n)$ times into a respective red, green and blue video signal. Thus, the proposed combination of references is improper insofar as the secondary references Ernstoff, McDowall and Konno fail to modify this deficiency since neither reference teaches or discloses such a feature. Accordingly, Applicant requests withdrawal of the rejections with respect to claims 32-45.

Conclusion

Because the claimed invention as presently amended clearly defines over the prior art of record, Applicant respectfully requests reconsideration and withdrawal of the rejection. Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



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